

the art of record for the reasons set forth below.

The present invention as claimed in claim 1 is directed to an electrical connector housing that has areas of reduced rigidity, each area of reduced rigidity comprising a notch or a slot that extends substantially perpendicular to a surface of the housing. Each notch or slot reduces stress caused by coefficient of thermal expansion (CTE) differential or mismatch, thereby accommodating connector warp. Thus, the present invention solves a reliability failure mechanism, CTE mismatch (specification, as originally filed, page 7, lines 4-6).

It is respectfully submitted that there is no apparent suggestion or motivation to combine the APA with Walker to solve the problem address by the Applicant at the time of the Applicant's invention because (i) Walker is not within the scope of relevant prior art, and moreover, (ii) the difference in the relative sizes of the connector of the APA and the connector of Walker preclude motivating one of ordinary skill in the art from such a combination.

The APA shows an interface connector, such as a relatively small ball grid array (BGA) connector 10. On the other hand, Walker is directed to a relatively large socket connector 20. Thus, it is respectfully submitted that Walker, on its face, is not within the relevant prior art to the claimed invention under examination.

The scope of the prior art is also determined by the problem addressed by the Applicant, and not by the claimed invention. For the invention under consideration, the problem is a reliability failure mechanism, the effects of CTE mismatch. The problem addressed by Walker was the electrical lengths and geometry of all interconnections between a silicon chip and a mother board. Thus, Walker does not address the same problem as the claimed invention. It is therefore submitted that a person of ordinary skill in the art of interface connectors would not be disposed to look to the art of socket connectors to solve a problem directed to CTE mismatch.

Furthermore, the relative size (i.e., height) of the socket connector 20 of Walker is much greater than that of the BGA interface connector 10 of the APA. This difference in the relative connector sizes would preclude one of ordinary skill in the art from such a combination. Thus, the Applicant submits that the cited references are not combinable under 35 U.S.C. § 103(a).

The claimed invention may seem simple. Nevertheless, "the simplicity of new inventions is often the very thing that is not obvious before they are made The fact that the

invention seems simple after it is made is not determinative of the question of obviousness.” In re Van Wanderhorn, Worthley, and Conolli, 154 USPQ 20, 24 (CCPA 1967).

Based on the foregoing, claims 1 and 8 should not be rejected as being unpatentable over Applicant’s APA in view of Walker. Thus, claims 1 and 8 are patentable for the reasons set forth above. Claims 4-7 and 16 are dependent on claim 1, and claims 10, 11, and 19-21 are dependent on claim 8, and are at least patentable over the art of record for the reasons set forth above. Withdrawal of the rejection of claims 1, 4-8, 10-16, and 19-21 under 35 U.S.C. § 103(a) is respectfully requested.

Claims 12-15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant’s Admitted Prior Art in view of Walker and McHugh et al. (U.S. Patent No. 6,033,236). It is respectfully submitted that claims 12-15 are allowable over the art of record for the reasons set forth below.

The present invention as claimed in claim 12 is directed to a method of reducing the rigidity in an electrical connector housing by determining a location on the housing where stress may build up, and then removing a portion of the housing at that location. The portion of the housing that is removed extends substantially perpendicular to a surface of the housing.

As noted above, there is no suggestion or motivation to combine the APA with Walker. McHugh fails to cure the deficiencies of the APA and Walker. McHugh merely describes a plug connector 10 having slots 38 that are parallel to a surface of the housing 12.

Based on the foregoing, claim 12 should not be rejected as being unpatentable over Applicant’s APA in view of Walker and McHugh et al. Thus, claim 12 is patentable for the reasons set forth above. Claims 13-15 are dependent on claim 12, and are at least patentable over the art of record for the reasons set forth above. Withdrawal of the rejection of claims 12-15 under 35 U.S.C. § 103(a) is respectfully requested.

DOCKET NO.: BERG-2462/C2346

PATENT

In view of the foregoing amendments and remarks, Applicants submit that the above-identified application is in condition for allowance. Early notification to this effect is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jonathan M. Waldman', written over a circular stamp.

Jonathan M. Waldman
Registration No. 40,861

Date: February 7, 2002

WOODCOCK WASHBURN LLP
One Liberty Place - 46th Floor
Philadelphia, PA 19103
(215) 568-3100